

Franklin Institute; Penn Monthly; Gen. W. A. Stokes; Smithsonian Institution; Bureau of U. S. Engineers; Dr. Hayden; Mr. Outenbridge; the Medical News; and the Buffalo Society of Natural Sciences.

The death of Prof. Samuel J. Gummere, President of Haverford College, at Haverford, Oct. 22, aged 63, was announced, and Prof. Thos. Chase, was on motion, appointed to prepare an obituary notice of the deceased.

Mr. Britton exhibited to the members present large specimen pieces of coals sent for metallurgical analysis from the Luray Mine, Carbon Mine, and mines near Rocky Spring Station on the Union Pacific Railroad, 830 miles west of Omaha. The character, age, and relationships of these coals with the so-called Lignitic beds of Hayden, the Denver and Raton and Santa Fe coals, were discussed at length by Dr. Genth and Dr. LeConte.

Pending nomination, No. 764 was read, and the meeting was adjourned.

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*Stated Meeting, November 20th, 1874.*

Present, 17 members.

Vice-President, MR. FRALEY, in the chair.

A Photograph for the Album was received from Prof. Traill Green, of Lafayette College, Easton, Pa.

A letter respecting the cataloguing of Libraries was received from Mr. W. C. Flagg, Secretary Ill. S. Farmer's Association, dated Moro, Ill., Nov. 10, 1874.

A blank to be filled was received from the Secretary of the Bureau of Education, at Washington, dated Nov. 11, 1874.

Letters acknowledging the receipt of the Society's Publications, were received from the Hungarian Academy of Sciences, Oct. 17, (XV, i, 88, 89, 90, 91); the R. Bavarian Academy, Sept. 15, (XV, i, 90, 91); the Philosophical and Literary Society, at Leeds, Oct. 28, (75 and 79); Prof. C. E. Anthon, New York, Nov. 18, (81 to 92); Prof. Traill Green,

Easton, Pa., Nov. 12, (81 to 92); Dr. Robert Peter, Lexington, Ky., Nov. 9, (81 to 92); and the Ohio State Library, Columbus, Nov. 13 (Cat. Pt. I).

Letters of envoy were received from the R. Bavarian Academy, Munich, Sept. 13, Mr. Stan. Meunier, Professor of Comparative Geology in Natural History Museum, at Paris, Oct. 28; the Meteorological Office of the Royal Society, in London; and the Smithsonian Institution.

Donations for the Library were received from the German Geological Society, the R. Prussian Academy, the Geological Association, at Dresden; the Vaudoise Society, at Lausanne, the Batavian Society Ex. Phil., at Rotterdam, the *Revue Politique*, M. Stan. Mennier, the R. Astronomical Society, London Nature, Boston Public Library, Academy of Natural Sciences, Franklin Institute, American Journal of Pharmacy, U. S. Coast Survey, Department of the Interior, and Mr. Adolph Schmidt, Jefferson City.

The volume on Comparative Geology presented by M. Meunier, was on motion, referred to a committee to be appointed at the next meeting.

The death of Mr. Charles B. Trego, Treasurer of the Society, at Philadelphia, Nov. 10, aged 80 years, was announced by the Vice-President, and on motion, Mr. S. W. Roberts was appointed to prepare an obituary notice of the deceased.

Mr. Britton exhibited and explained a model illustrating his method of keeping a laboratory free from the gases evolved when metals and minerals are dissolved in acids.

He dissolves in test tubes supported in position on wire gauze frames. The tops of the tubes are covered with glasses shaped like tubular funnels inverted, the tubular end of which being bent at nearly a right angle are made to pass horizontally into a long wooden chamber four inches wide by six inches deep. The chamber may be of any length; it connects at either end or in the centre with a wooden chimney, six by twelve inches in the clear, passing from the laboratory up and above the roof of the building. Heat is applied to the lower end of the tubes by moveable Bunsen burners. The gasses are carried away as fast as evolved by the constant current of air which passes through the chamber and up the chimney.

So completely have the gasses been conducted away, that several very delicate Becker balances have been in use for some years within a few feet of the tubes, without being perceptibly affected. He uses tubes va-

rying from one to two inches in diameter and about ten inches long—and also flasks. Any number may be used at the same time, set about six inches apart. He has frames for thirty-six. It is best to make the funnels pear-shaped, to allow their edges to slip into the tubes that any drops of condensed moisture may not fall outside.

Mr. Britton also exhibited several mounted burettes for volumetric analysis of the kind described in the Journal of the Franklin Institute, for May 1870, and which he has had in use for more than nine years. He exhibited them to show that the one exhibited by Dr. Geo. A. Koenig, at the meeting of the Society, held August 21st, 1874, differed in no essential feature from them.

Mr. Britton had tried wood, leather, lead, tin, glass, india-rubber and cork, for the stopper or valve. He preferred close-grained cork when using solutions of per manganate and bichromate of potash, and this after five thousand iron determinations with it. Glass he preferred to all other substances when using acids or strong alkaline solutions.

The graduation was on white paper behind the tube. The thumb knob of the screw was behind the frame, but the spring and valve was in front. This arrangement he preferred. The contents of the tube could be discharged much faster than necessary for analytical purposes, or so slow that only a fraction of a drop could be caught on the stirring rod and conveyed to the solution to be tested in the vessel beneath.

He also exhibited an adjustment of the spring and screw to the rod-stoppered burette. The burette was mounted on a stand. A spring lever was on the top and connected at one end with the rod-stopper, and at the other end with a metal rod. The latter extended down the back of the instrument to near the bottom, and had attached to it a thumb-screw arrangement. By simply turning the screw the stopper could be completely controlled while the eye watched the flow.

Mr. Britton referred again to the Recky Mountain coals exhibited at the last meeting, simply saying in advance of analysis that they were all coking coals.

Mr. Poole obliged the members present with descriptions of the coals of Nova Scotia, and of the character of the gold quartz, veins, and present condition of the gold-mining industry of the province.

Dr. LeConte offered for publication in the Proceedings, a list of North American Lepidopterae (platypterices, &c.,) with notes by Augustus R. Grote, of Albany.

Minutes of the last meeting of Officers and Members in Council, were read.

Pending nominations, No. 764, was read.

Mr. Fraley nominated in behalf of the Committee of Finance, Mr. J. Sergeant Price, to fill the vacancy left by the

death of the Treasurer. On motion, Mr. Price was elected to fill the vacancy.

Mr. Fraley reported that he had received and was prepared to turn over to the Treasurer elected, the quarterly interest on the Michaux Legacy, due Oct. 1. 1874.

And the meeting was adjourned.

*Stated Meeting, December 4th, 1874.*

Present, 17 members.

Vice-President, MR. FRALEY, in the chair.

A letter accepting membership was received from Baron Franz von Hauer, dated Nov. 7, 1874.

A letter requesting additional copies of Proceedings and Transactions, was received from the Holland Society of Science, at Harlem, Nov. 3, 1874.

Letters of envoy were received from the Entomological Society, of Belgium, and the State Department, at Washington.

A letter was received from the Baron de la Roncière le Noury, V. A. President of the Geological Society at Paris, with documents, asking for the concurrence of the A. P. S., in the International Congress of Geographical Sciences to be held next spring, in Paris.

Donations for the Library were received from the Editor of Flora Batava, Leyden; the Entomological Society, Belgium; Annales des Mines; Revue Politique; London Nature; Geological Society, and Society of Antiquaries, London; American Chemist; Prof. James Hall, and the Regents of the University of New York; Silliman's Journal, Franklin Institute, Penn Monthly, Mrs. Emma Seiler, of Philadelphia; and Dr. T. Sterry Hunt, of Boston.

The death of John Meredith Read, Ex-Chief Justice of the Supreme Court of Pennsylvania, at Philadelphia, Nov. 29, aged 77, was announced by Mr. E. K. Price, who, on motion, was appointed to prepare an obituary notice of the deceased.